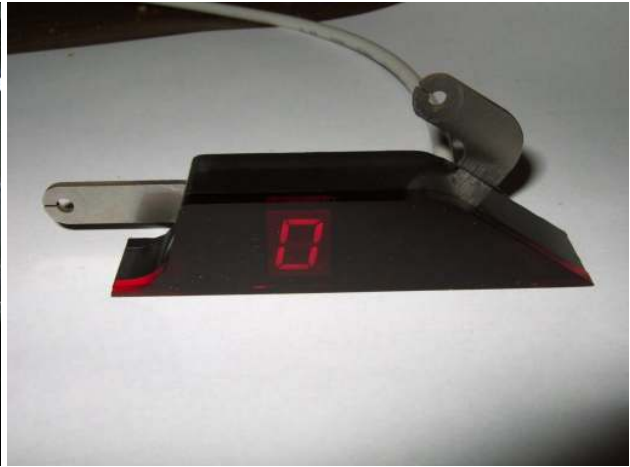


Gear Indicator FZ1 – Installation instructions

Overview

This Gear-Indicator is designed to work with a Yamaha FZ1N/Fazer motorbike ('06 onwards). The module will be mounted to the lower edge of the dashboard and connected to the main harness.



The Gear-Indicator utilizes the signals of speedo, revmeter and neutral-switch. From these inputs the current gear is determined and shown on a LED-display. Luminosity is switchable to avoid dazzling in darkness.

All subsequent information are based on the information about a Yamaha FZ1 '06. No guarantee can be given that this guide is applicable to all types or years of manufacture. All modifications are on your own risk.

Mounting

In front of installation fuel-tank and dashboard have to be removed. To ease cable routing it is also recommended to disassemble the airbox.

The gear indicator module is fixed with two screws to the backside of the dashboard. The brackets get additional spacer bushings and elongated screws (included in package).

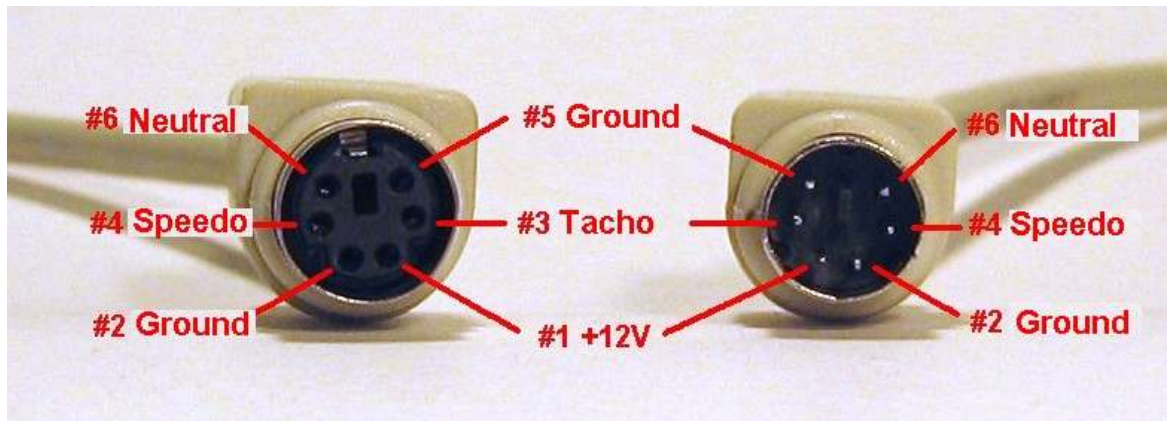


The cable is routed to the shown position below the tank where all needed electrical signals are located.

Gear Indicator FZ1 – Installation instructions

Electrical

The cable is equipped with a PS/2-connector. There are six single wires with the following pin assignment:



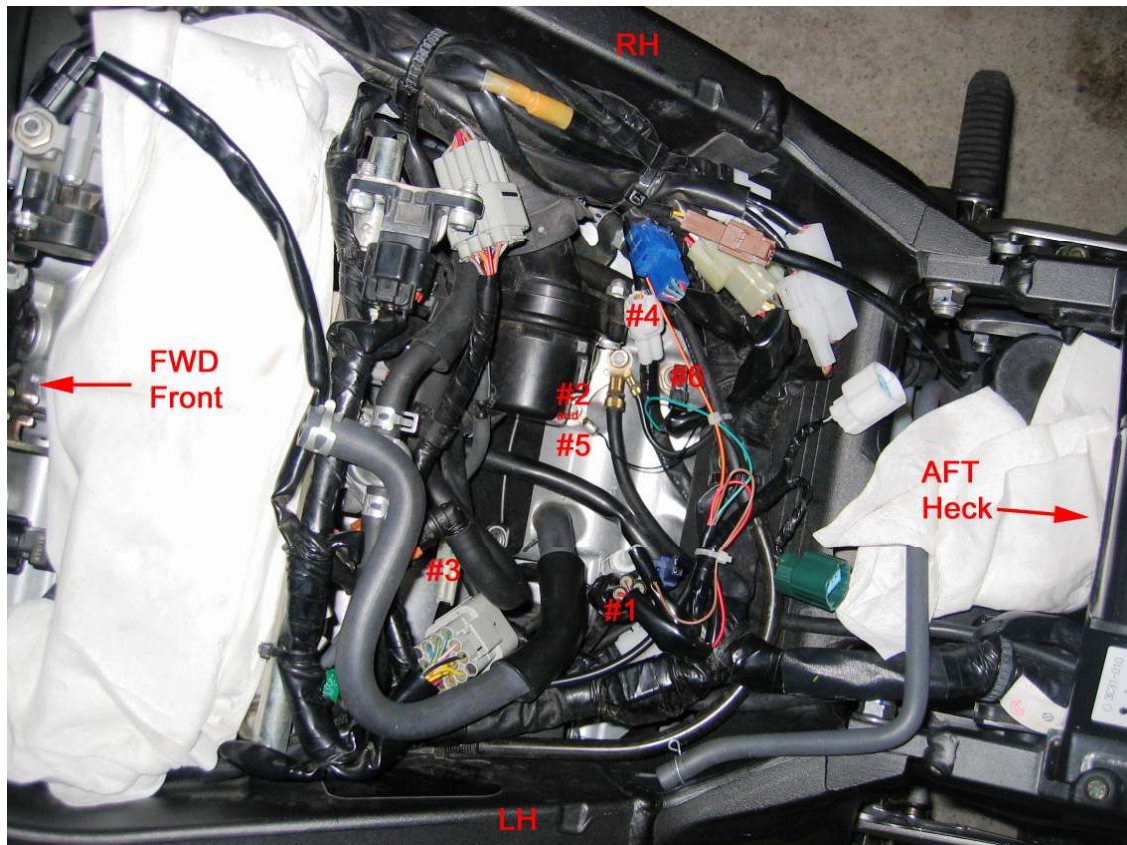
Pin configuration:

#	Function / signal
1	+12V Supply
2	Ground
3	Tacho signals (RPM)
4	Speedo signals
5	Ground
6	Neutral switch

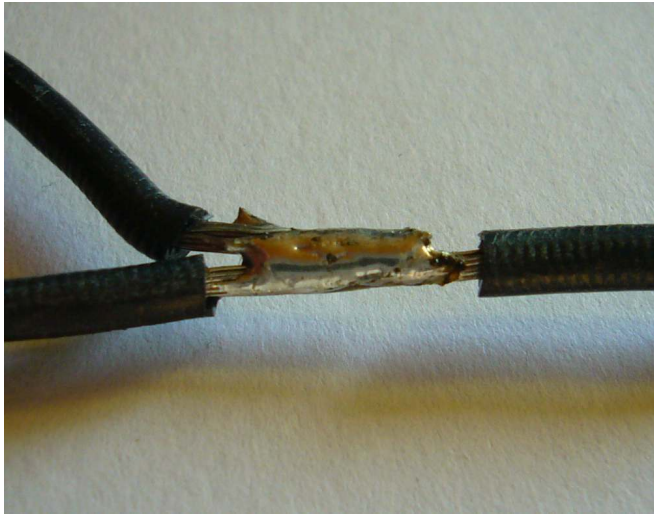
The corresponding wire-colors have to be determined individually with a multi-meter. Furthermore colors may differ from sample to sample!

Signal „Ground“ exists twice. Both wires are in parallel and equal in function. To get best signal quality they should be connected to the same ground-point.

The next picture gives an overview about the connection points to the main harness:



Gear Indicator FZ1 – Installation instructions



The harness should not be cutted. It is better practice to create a tap as shown in the picture. The insulation is removed for a few millimeters and the tap is soldered on top.

A soldered tap should always be preferred to any squeeze-type joint. The tap has to be protected accurately again moisture with an adhesive tape.

1. +12V Supply



Use the **red/white cable**.

Four-pin-plug to lambda-sensor. Any other plug that is live with ignition is as good.

Example picture shows additional (red) cable soldered directly to the pin.

2. + 5. Ground



Use the **black cable** going to the engine body or chassis/frame.

Picture shows connection using a terminal tag.

Gear Indicator FZ1 – Installation instructions

3. Tacho (Revs) signal from crankshaft sensor



Use the **gray** cable.

The signal comes from the sensor located at the crankshaft. 2-pin-connector: gray, black/blue

4. Speedo signal



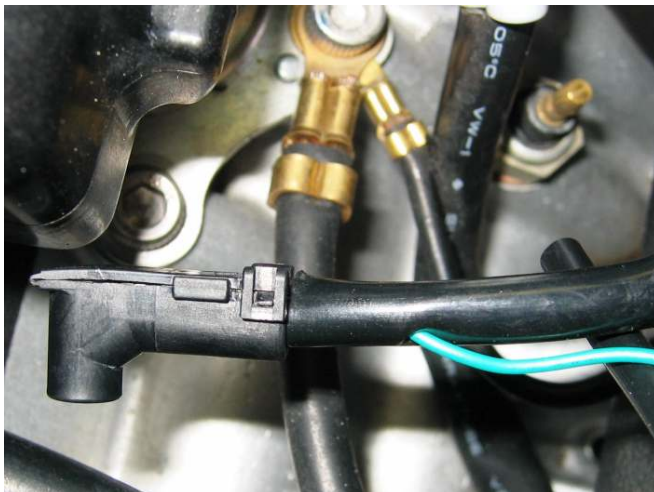
Use the **white-yellow** cable.

3-pin-connector, white plastic, wires: white/yellow, lightblue, black/blue.

The speedo-sensor is located at the rear part of the engine.

In case that a speedo-converter is installed use the uncorrected signal from before the box.

6. Neutral



Use the **lightblue** cable.

Find the neutral-switch in the upper right corner of the picture (screwed into the gearbox). The connector is detached for better visibility, lying in the foreground.

Gear Indicator FZ1 – Installation instructions

Operation

The only control is a single button on the backside. Touching the button shortly toggles the luminosity between high and low.

Keeping the button pressed for a few seconds enters the settings menu. A detailed description is available in a separate document.

Testing

If necessary the correct cabling can be verified with build-in test functions.

- Switch on ignition, engine still off, gear indicator should start-up. Neutral is shown as "0", any other gear as "-".
- Enter settings menu: Keep button pressed until decimal point turns off. Release button.
- Press button **6** times, the display shows each count.
- > Turn the rear-wheel by hand. The display shows a moving segment, jumping to the next position with each **speedo trigger**.
- Enter settings menu: Keep button pressed until decimal point turns off. Release button.
- Press button **7** times, the display shows each count.
- > Let the engine run at idle. The display shows a moving segment, jumping to the next position with each 10th **rev trigger**.

Abort testing at any time by a short press to the button.

Ready for use!

Remarks

Many thanks to all having contributed informations to complete this guide, especially Urs, Thomas and the colleagues from www.Fazerforum.net.

Please let me know for any proposals, suggestions or corrections.